ABSTRACT OF THE DISCLOSURE

A method and system for automatic gain control is provided. The automatic gain control

may be used, for example, with a microphone and voice codec of a speakerphone telephone. In

5   an exemplary embodiment, an amplification gain lookup table stores the gain values. The power

of the input signal is estimated and the appropriate gain value is selected as a function of the

estimated power of the input signal. The gain value is applied to the input signal to provide an

automatic gain controlled output signal. In another embodiment, the gain lookup table may be

adapted to compensate for the non-linearity of the microphone and voice codec of the

10   speakerphone. In this alternate embodiment, the output power of the automatic gain controlled

signal is estimated and compared to a reference signal to generate an error signal. The error

signal may be scaled and used to update and dynamically adapt the gain values in the gain

lookup table.